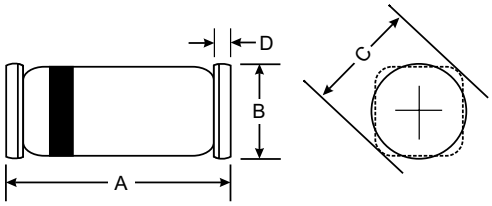
LS4148/LS4448

150mA Surface Mount Fast Switching Diode

Features

- Silicon Epitaxial Planar Diodes
- Electrical data identical with the devices 1N4148 and 1N4448 respectively
- Quadro Melf package
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



QuadroMELF		
Dim	**Min**	**Max**
A	3.3	3.7
B	1.4	1.6
C	1.7∅ Typical	
D	0.3 Typical	
All Dimensions in mm		

Mechanical Data

- **Case:** QuadroMELF Glass case (SOD80)
- **Weight:** approx. 34 mg
- **Cathode Band Color:** Black
- **Packaging Codes/Options:**
  GS18/10 k per 13" reel (8 mm tape), 10 k/box
  GS08/2.5 k per 7" reel (8 mm tape), 12.5 k/box

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	100	V
Reverse voltage		V_R	75	V
Peak forward surge current	t_p = 1 µs	I_{FSM}	2	A
Repetitive peak forward current		I_{FRM}	500	mA
Forward continuous current		I_F	300	mA
Average forward current	V_R = 0	I_{FAV}	150	mA
Power dissipation		P_{tot}	500	mW

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 5 mA	LS4448	V_F	620		720	mV
	I_F = 50 mA	LS4148	V_F		860	1000	mV
	I_F = 100 mA	LS4448	V_F		930	1000	mV
Reverse current	V_R = 20 V		I_R			25	nA
	V_R = 20 V, T_j = 150 °C		I_R			50	µA
	V_R = 75 V		I_R			5	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 ms		$V_{(BR)}$	100			V
Diode capacitance	V_R = 0, f = 1 MHz, V_{HF} = 50 mV		C_D			4	pF
Rectification efficiency	V_{HF} = 2 V, f = 100 MHz		η_r	45			%
Reverse recovery time	I_F = I_R = 10 mA, i_R = 1 mA		t_{rr}			8	ns
	I_F = 10 mA, V_R = 6 V, i_R = 0.1 x I_R, R_L = 100 Ω		t_{rr}			4	ns

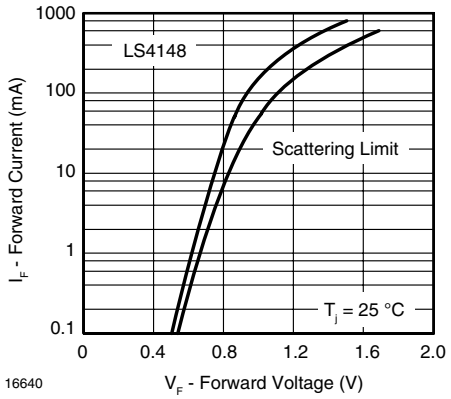


Figure 1. Forward Current vs. Forward Voltage

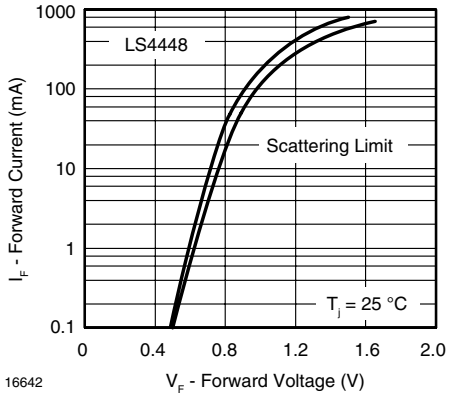


Figure 2. Forward Current vs. Forward Voltage

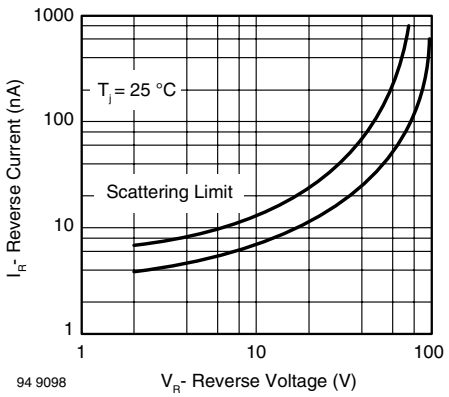


Figure 3. Reverse Current vs. Reverse Voltage

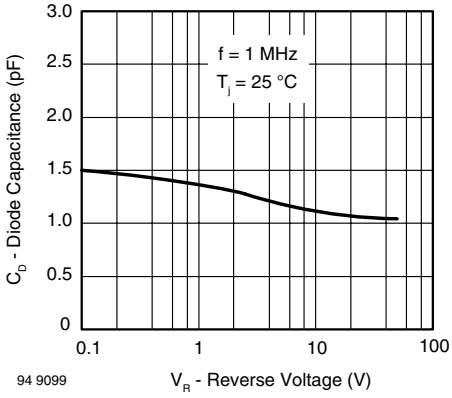


Figure 4. Diode Capacitance vs. Reverse Voltage